21(10)

AUTHOR: Mel'nikov, G. P.

SOV/53-68-1-15/17

TITLE: A Survey of the Recording Principles Applied to Multi-channel-amplitude- and Time Analyzers (Obzor printsipov registratsii, ispol'zuyemykh v mnogokanal'nykh amplitudnykh i vremennykh analizatorakh)

PERIODICAL: Uspekhi fizicheskikh nauk, 1959, Vol 68, Nr 1, pp 179-184 (USSR)

ABSTRACT: In view of the fact that only few data are available on the application of multi-channel analyzers for pulse amplitudes and time intervals in many fields of experimental physics, it seemed to be desirable to give a survey of the principles underlying these recorders. In the introduction the author deals with problems of classification. A multi-channel analyzer consists in principle of two blocks, a sorting and a recording one. The former distributes the signals to be analyzed among the individual channels, the latter is designed for (1) the addition of the number of pulses in the channels, (2) storing the results obtained, (3) reading the results, and (4) canceling results and recording new ones. The first multi-channel analyzers used as recorders, were

Card 1/3

equipped almost exclusively with electromechanical counters. Today there are many recorders available (thyratron, dekatron, photoelectric apparatus, apparatus operating on the basis of ferrites, etc). Their capacity, fast operation, and complicated design are their regular specific features. Multi-channel recorders may be divided into four types. The first type (hitherto the most usual one) is a multi-channel recorder with independently recording devices in each channel. The second type is described by the example of an analyzer with ferrite storage. Each channel is fitted out with a chain of storage elements. The third type is much older than the second one. This analyzer was developed by Hutchinson and Scarrott (Ref 10); it is described in detail. Tsitovich et al developed a modification of this type which operates with a photoelectric tube. A few other modifications are mentioned in short; all apparatus of this type operate in a cyclic manner and have a characteristic period. The multi-channel recorders which are employed as storing devices and operate with a "potentialoscope" belong to the fourth type. The author describes their mode of operation. One of

the latest models of this type (USSR, Ref 18) contains in the recording section about sixty electron tubes and allows to record data in 1024 channels, each of them possessing a capacity of 65,535 data. One storage element is treated in about three microseconds. There are 18 references, 10 of which are Soviet.

S/053/61/073/004/007/007
B125/B201

AUTHOR: Mel'nikov, G. P.

TITLE: Measurement of multidimensional spectra in nuclear physics

PERIODICAL: Uspekhi fizicheskikh nauk, v. 73, no. 4, 1961, 767-773

TEXT: The present survey deals with the basic techniques for measuring multidimensional spectra in experimental nuclear physics. A description is also given of a method of determining multidimensional spectra by means of a multichannel analyzer with electron-beam register. This method ensures a high efficiency in counting the events to be studied. In the practice, the preliminary memory method has been found to serve best for a sharp increase of the counting efficiency when taking multidimensional (more precisely, three-dimensional) spectra, and for the fullest possible registering of all events referring to the area of the spectrum concerned. The main characteristic of this method is the two-stage taking of the multidimensional spectrum. First stage: storage of data during the time of the physical experiment; second state: interpretation of stored data after completion of experiment. The reliability of the method of

provisional storage is manifest in the high efficiency of the recording of events, which is particularly important in case of a weak intensity of correlated events. The deficiencies of this method are likewise manifest: two-stage taking of spectra, necessity of repeated checking of the same data for the selection of a sufficient number of cross sections of the three-dimensional spectrum, method technically cumbersome. A description is also given of a new method of taking multidimensional spectra, which, while possessing the advantages of the provisional storage methods, is free from their deficiencies. This method is realized best by means of a single-channel analyzer using a multichannel electron-beam register. All variants of such an analyzer are quick in operation, are provided with a sufficient number of channels and can be easily converted into a device for taking and for stereoscopically observing multidimensional spectra. The results of the analysis are represented in the form of a rectangular raster, on which the binary numbers of the pulses recorded in each channel are indicated by luminous points. For example, the histogram in a 1024-channel recorder of an ЭЛА-3 (ELA-3) analyzer is divided into eight "levels" with 128 channels each. To perform the conversion of an ELA analyzer into one for taking three-dimensional spectra,

it is further necessary to introduce a second similar apparatus (which may or may not allow a signal to pass through for analysis), and a second multichannel discriminator. Each recorded event has two coordinates: the number of channel and the "level" number: each level thus represents the two-dimensional spectrum of a cross section of the three-dimensional space, in compliance with requirements. Using this technique one can, in principle, do without the second stage of the interpretation of data, and it is at once possible (even while the physical experiment is still in progress) to divide the multidimensional spectrum into plane cross sections, and to observe their growth directly during the experiment. The resulting simplification is clearly shown by Fig. 2. To convert the analyzer of plane spectra into a multidimensional analyzer it is only necessary to insert input no. 2 into the address system of the ELA analyzer circuit. Fig. 3 illustrates the principle of production of a stepped voltage in a multidimensional analyzer. Two additional inputs would be required to take a four-dimensional spectrum. Some remarks are finally added regarding the results from the interpretation of analytical data: The family of cross sections of the multidimensional spectrum, presented on the register screen, provides a sufficiently clear descrip-

Card 3/4

Measurement of multidimensional spectra...

tion of the physical phenomena under investigation. It is even better, however, to observe the spatial picture not as separate cross sections, but as a stereoscopic picture. To this end, one need only introduce into the system of stepped deflection in the oscilloscope tube an additional switch, as well as a general potentiometer for the vertical displacement of the cross sections, and two independent potentiometers for their horizontal displacement. The first developed three-dimensional analyzer of this type (based on the ELA-2 apparatus) was successfully tested late in 1959. It permits delicate experiments to be performed in nuclear physics and in other fields of science. There are 4 figures and 10 references: 4 Soviet-bloc and 6 non-Soviet-bloc. The two most recent references to English-language publications read as follows: M. Birc, T. Braid, R. Detenbeck, Rev. Sci. Instr. 29, 203 (1958); R. L. Becker, Phys. Rev., 119, 1076 (1960).

Card 4/4

37793

S/120/62/000/002/017/047
E140/E163

21.6000

AUTHORS: Glukhov, Yu.A., Kurashov, A.A., Mel'nikov, G.P., and Sidorov, V.A.

TITLE: Application of the STA teletype apparatus for information output from a multichannel analyser

PERIODICAL: Pribory i tekhnika eksperimenta, no.2, 1962, 70-75

TEXT: The article describes the use of a teletype apparatus for the output of information directly from the internal (es) memory of a multichannel fast-neutron spectrometer. Output is in the form of a printed sheet and a five-row punched tape. The latter is used for input to a computer. The stored information was originally in binary form, but due to difficulties in binary-decimal conversion at the output, it was decided to record in the (es) memory directly in decimal. To prevent loss of capacity, the number of bits per channel was increased from 16 to 20 on the crt, which was found possible while retaining 256 channels as before. The decimal code used is the one in which the digits from 0 to 7 are in straight

Card 1/2

binary form, 8 corresponds to binary 1110, and 9 to 1111. A dash is used to separate the data printed for each channel. It is stated that the substitution of ten type slugs on the teletype machine as required by the application takes one working day of a workman of "average qualification". The output rate is one channel per minute. The output system has been in use since May 1960 in the authors' laboratory, and has demonstrated reliable operation. It has reduced the time required for the processing of each spectrum from two working days to two minutes.
There are 3 figures.

ASSOCIATION: Institut atomnoy energii AN SSSR
(Institute of Atomic Energy, AS USSR)

SUBMITTED: May 6, 1961

Card 2/2

L 34795-66 EWT(1)

ACC NR: AR6017204 SOURCE CODE: UR/0058/65/000/012/A035/A035

AUTHOR: Mel'nikov, G. P.

TITLE: Analysis of operation of a transistor cascode amplifier

SOURCE: Ref. zh. Fizika, Abs. 12A330

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 1. M., Atomizdat, 1964, 100-103

TOPIC TAGS: transistorized amplifier, voltage amplifier, temperature dependence, magnetic recording

ABSTRACT: The article describes a cascode circuit in which the upper transistor is used as a nonlinear load resistance for the lower. Such a circuit is equivalent to a voltage amplifier with the following characteristic features: 1) the relative position of the operating point and the gain of the circuit are not directly dependent on the supply voltage; 2) a change in the ambient temperature affects the parameters of both transistors in almost the same manner. However, the output resistance of the circuit is of the order of several hundred kilohm. The operating principle of such an amplifier is described. The results of testing the circuit with transistors P-101, P-102, and P-103 are described. At values of β from 4 to 40, the gain ranges from 1000 to 1700. The circuit turned out to be stable even in the case when the transistor parameters were different. The amplifier gain fluctuates over the working day within ±10%. The circuit operates as a high-quality magnetic-tape recorder amplifier and can be recommended for use in different tape recording devices which are widely used in modern instruments for nuclear electronics. [Translation of abstract]

SUB CODE: 09, 20/

Card 1/1

L 35367-66 EWT(1)/EEC(k)-2

ACC NR: AR6017796 SOURCE CODE: UR/0058/66/000/001/A047/A047

AUTHOR: Mel'nikov, G. P.; Gugnin, Yu. Ya.

TITLE: Stabilization as an optical pickup in a remote transmission channel

SOURCE: Ref. zh. Fizika, Abs. 1A420

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 1. M., Atomizdat, 1964, 104-106

TOPIC TAGS: voltage stabilizer, light transmission, optic piping, scintillation, pulse amplitude, photomultiplier

ABSTRACT: In many cases it is necessary to transmit signals of considerable intensity from a scintillation pickup over a certain distance, without conductors and without losing the information on the signal amplitude. In such cases it is usually necessary to produce an optical transmission channel. It is proposed to convert the voltage pulses into proportional light flashes by using an ordinary stabilitron (ballast tube). It has been established experimentally that the best results are obtained with the SG-3S tube. It operates in the following mode: At a supply voltage of the order of 220-230 v, a load resistance is chosen to make the stabilitron current 3 - 5 ma. The transformed positive pulse is applied through a capacitor directly to the stabilitron. The amplitude of the positive signal can reach 120 v and its duration is of the order of 10 μsec. The light of the flash travels in a limiter tube over a distance of several meters to a photomultiplier on the receiving end of the tube.

Card 1/2

L 35367-66
ACC NR: AR6017796

The pulse from the photomultiplier has a front of the order of 7 μsec, a trailing end of 40 - 50 μsec, and an amplitude proportional to the pulse amplitude applied to the stabilitron. The resolution of the pulses from the photomultiplier is of the order of 3% at half-width. The nonlinearity of the transformation, with the exception of the most extreme sections of the curve, is of the order of 3%, and the dynamic range is about 10. M. R. [Translation of abstract]

SUB CODE: 20, 09

Card 2/2

L 34791-66 EWT(1)/EEC(k)-2/T IJP(c)

ACC NR: AR6017208 SOURCE CODE: UR/0058/65/000/012/A036/A036

AUTHOR: Mel'nikov, G. P.

TITLE: Current-controlled tunnel-diode circuits with many stable states

SOURCE: Ref. zh. Fizika, Abs. 12A339

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 1. M., Atomizdat, 1964, 115-118

TOPIC TAGS: tunnel diode, flip flop circuit, trigger circuit

ABSTRACT: A circuit containing a chain of n series-connected tunnel diodes operates like a flip-flop with n stable states that differ in the voltage levels on the chain. Triggering of such chains is best carried out by means of current pulses. Variants of circuits in which a pentode or transistor serves as the current generator are described. V. P. [Translation of abstract]

SUB CODE: 09/

Card 1/1

L 47092-66 EWT(m)/EWP(k)/EWP(w)/EWP(t)/ETI IJP(c) EM /JD/HW

ACC NR: AP6030262 SOURCE CODE: UR/0147/66/000/003/0133/0136

AUTHOR: Mel'nikov, G. P.; Sveshnikov, V. M.

51 B

ORG: none

TITLE: Thermal stress relaxation in a thin-wall tube under elasto-plastic deformation

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 3, 1966, 133-136

TOPIC TAGS: thin wall tube, thermal stress, plastic deformation, elastic deformation, stress relaxation

ABSTRACT: An investigation was made of thermal stress relaxation in a tube under conditions of elasto-plastic equilibrium and the effect of plastic deformation on the relaxation process was demonstrated. The problem was solved for a steady-state, axially symmetric temperature field, which is constant along the axis of the tube made of an ideally plastic material with a simple creep-temperature dependence. The conditions of similarity of the creep curves were used in the solution. Orig. art. has: 3 figures and 11 formulas. [AV]

SUB CODE: 20,13/ SUBM DATE: 11Oct65/ ORIG REF: 004/

Card 1/1 hs UDC: 539.377

L 09046-67

ACC NR: AR6033771 SOURCE CODE: UR/0058/66/000/007/A030/A030

AUTHOR: Mel'nikov, G. P.

TITLE: Basic criteria for rating the logical structure of multichannel recorders

SOURCE: Ref. zh. Fizika, Abs. 7A265

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 3. Ch. 1. M., Atomizdat, 1965, 38-62

TOPIC TAGS: recording equipment, multichannel analyzer

ABSTRACT: A classification of recording equipment used in multichannel amplitude and transient analyzers is given; the classification is similar to that published in (RZhFiz, 1959, No. 3, 5170). The general principles of the proposed classification are discussed in detail. [Translation of abstract]

SUB CODE: 14, 20/

Card 1/1 nst

ACC NR: AR6035365 SOURCE CODE: UR/0271/66/000/009/B003/B003

AUTHOR: Mel'nikov, G. P.

TITLE: Method of pulse-potential diagrams in selecting logic circuits for digital devices

SOURCE: Ref. zh. Avtomatika, telemekhanika, i vychislitel'naya tekhnika, Abs. 9B15

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 3. Ch. I. M., Atomizdat, 1965, 26-37

TOPIC TAGS: digital system, computer logic, computer design, logic circuit, digital computer

ABSTRACT: The author describes the pulse-potential diagram method, which reduces to the construction of diagrams of paired logical relationships in homogeneous nodes, i.e., in logic circuits whose inputs and outputs are represented by the same physical quantities (for example two voltage levels). Such a representation simplifies the synthesis of the logic networks and makes it possible, without resorting to manipulations of algebraic logic, to evaluate the structure of the logical network directly from the pulse-potential diagram. A procedure for constructing and the diagrams and working with them is described. The method makes it possible to represent time-domain relations and connections between variables. The pulse-potential diagrams make it also possible to take into account the "non-ideal" wave form of the discrete signals present in real physical systems. The description of the method is illustrated by means of examples. 5 illustrations. V. Ya. [Translation of abstract]

SUB CODE: 09

UDC: 681.142.1

Card 1/1

MEL'NICHUK, S.P., starshiy nauchnyy sotrudnik; MEL'NIKOV, G.S., nauchnyy sotrudnik

Change in the function of external respiration under the influence of health resort treatment in Kislovodsk. Uch.zap.Pyat.gos.nauch.-issl.bal'n.inst. 3:307-322 '60. (MIRA 15:10)
(RESPIRATION) (KISLOVODSK--HEALTH RESORTS, WATERING-PLACES, ETC.)

ACCESSION NR: AR4040829 S/0058/64/000/005/E067/E067

SOURCE: Ref. zh. Fizika, Abs. 5E502

AUTHOR: Mel'nikov, G. S.; Tarasov, V. V.

TITLE: The hardness of simple compounds

CITED SOURCE: Tr. Mosk. khim.-tekhnol. in-ta im. D. I. Mendeleyeva, vy*p. 41, 1963, 5-7

TOPIC TAGS: hardness, oscillation, oscillation zero point energy, lattice, simple compound

TRANSLATION: There is introduced a new criterion of harness--the zero-point energy of oscillations of atoms of the lattice

$$E_0 = \int_0^{\infty} g(\nu)(h\nu/2)d\nu,$$

Card 1/2

ACCESSION NR: AR4040829

where $g(\nu)$ — distribution function of frequencies ν, where it is assumed that the greater E_D, the greater the hardness. There is obtained good coincidence between E_D and experimentally measured hardness for a number of elements (Li, Na, K, Be), oxides, and alkali-halide compounds.

SUB CODE: SS ENCL: 00

Card 2/2

PA 30/49T51

MEL'NIKOV, G. V.

USSR/Engineering
Engines, Diesel
Fuel Consumption

Dec 48

"An Investigation of the Influence of Forced Blowing on the Power Increase of the Diesel 2-RK-30," G. V. Mel'nikov, Ya. M. Feyenberg, Polytech Inst imeni Kalinin, 8 pp

"Energet Byul" No 12

Concludes that use of forced blowing increases power of type RK-30 motor up to 40% of normal, while average effective pressure is reduced to value close to normal for contemporary two-

38/49T51

USSR/Engineering (Contd) Dec 48

stroke motors. Unit expenditure of fuel for motor is reduced under maximum loads.

38/49T51

MEL'NIKOV, G.V.; PETROV, V.M.

Methods and equipment for evaluating the thermal properties of spark plugs. Trudy LPI no.187:137-147 '56. (MIFA 13:6)
(Spark plugs--Testing)

MEL'NIKOV, G.V.

KOLLEROV, L.K.; MEL'NIKOV, G.V., kandidat tekhnicheskikh nauk, dotsent, retsenzent; GRIBANOV, V.I., kandidat tekhnicheskikh nauk, redaktor; FETISOV, F.I., inzhener, redaktor; SOKOLOVA, L.V., tekhnicheskiy redaktor.

[Piston type gas engines] Gazovye dvigateli porshnevogo tipa. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1955. 211 p. (Gas and oil engines)

MEL'NIKOV, G.V.; LIVENTSEV, F.L.; PETROV, V.M.; KOSTIN, A.K.

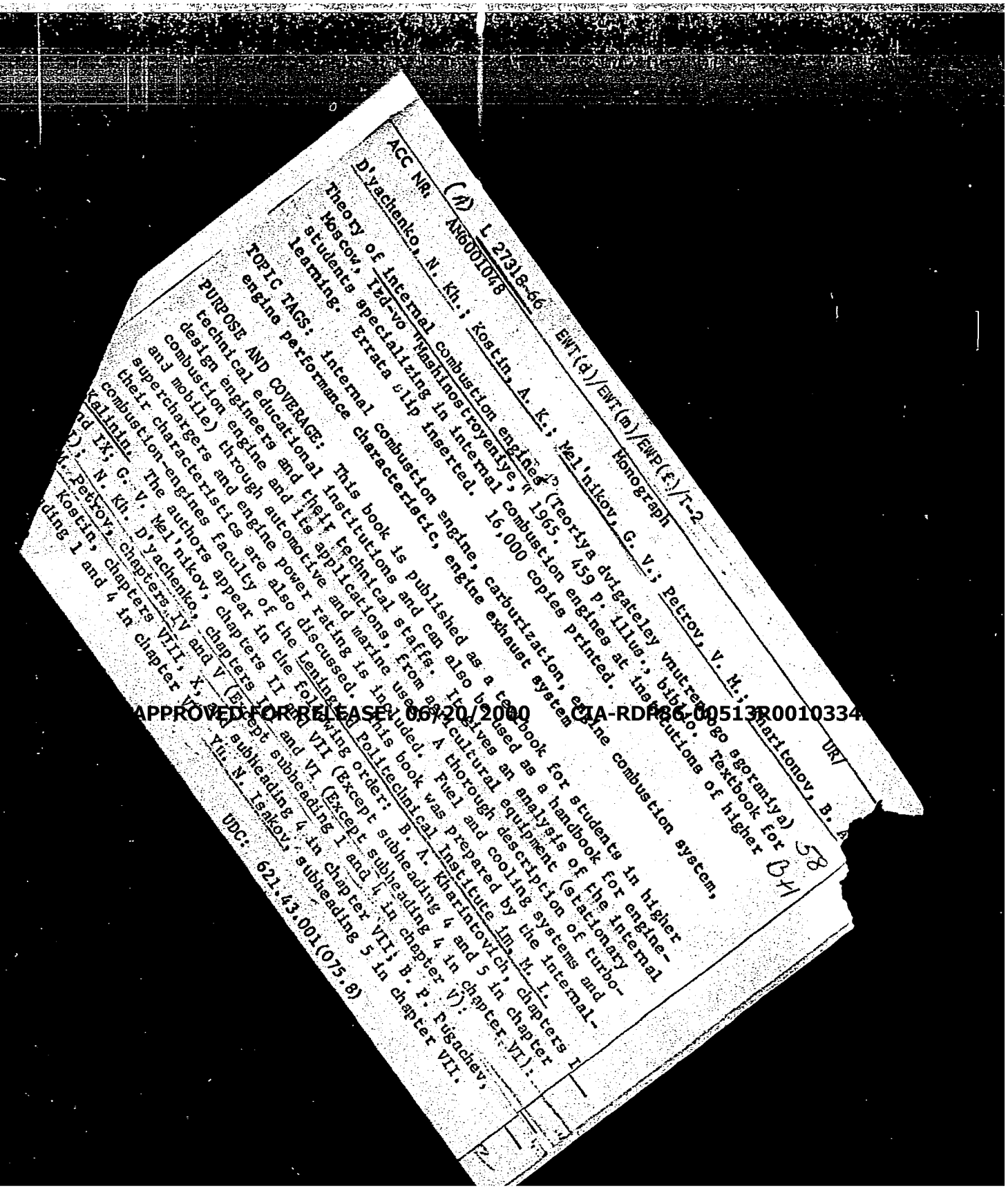
High-temperature cooling of the 10GK-1 gas motor compressor.
Trudy LPI no.221:153-165 '62. (MIRA 15:9)
(Compressors--Cooling) (Gas, Natural--Transportation)

MEL'NIKOV, G.V.

External characteristic of an internal combustion engine and its analytical expression. Trudy LPI no.228:95-101 '63. (MIRA 17:1)

GORODETSKIY, V.I., inzh.; ZYBIN, P.M., inzh.; ISAKOV, Yu.N., inzh.; D'YACHENKO, N.Kh., doktor tekhn.nauk, prof.; LIVENTSEV, F.L., kand.tekhn.nauk, dotsent; MEL'NIKOV, G.V., kand.tekhn.nauk, dotsent

A new gas pipe line compressor station with evaporation cooling of the gas motor compressors. Energomashinostroenie 10 no.1:27-29 Ja '64. (MIRA 17:4)



(41) L 27318-66 EWT(d)/EWT(m)/EWP(t)/r-2 URI

ACC NR: AM6001048 Monograph

D'yachenko, N. Kh.; Kostin, A. K.; Mel'nikov, G. V.; Petrov, V. M.; Kharitonov, B. A.

Theory of internal combustion engines (Teoriya dvigateley vnutrennego sgoraniya) Textbook for higher technical educational institutions and can also be used as a handbook for engine-design engineers and their technical staffs. It gives an analysis of the internal combustion engine and its applications, from automotive and marine used to agricultural equipment (stationary and mobile) through automotive power rating is included. A thorough description of turbo-supercharges and engine discussed. Fuel and cooling systems and their characteristics are also discussed. This book was prepared by the internal-combustion-engines faculty of the Leningrad Politechnical Institute im. M. I. Kalinin. The authors appear in the following order: B. A. Kharintovich, chapters I and IX; G. V. Mel'nikov, chapters II and VII (Except subheading 4 and 5 in chapter VI); N. Kh. D'yachenko, chapters III, X, and V (Except subheading 4 in chapter V); V. M. Petrov, chapters IV and VI (Except subheading 4 in chapter VI); A. K. Kostin, chapters VIII, X, and subheading 4 in chapter VII; B. P. Pugachev, subheading 1 and 4 in chapter VII, subheading 5 in chapter VII.

UDC: 621.43.001(075.8)

TOPIC TAGS: internal combustion engine, carburization, engine exhaust system, engine combustion system, engine performance characteristic, engine exhaust system

PURPOSE AND COVERAGE: This book is published as a textbook for students in higher technical educational institutions and can also be used as a handbook for engine-design engineers and their technical staffs. It gives an analysis of the internal combustion engine and its applications, from automotive and marine used to agricultural equipment (stationary and mobile) through automotive power rating is included. A thorough description of turbo-supercharges and engine discussed. Fuel and cooling systems and their characteristics are also discussed. This book was prepared by the internal-combustion-engines faculty of the Leningrad Politechnical Institute im. M. I. Kalinin. The authors appear in the following order: B. A. Kharintovich, chapters I and IX; G. V. Mel'nikov, chapters II and VII (Except subheading 4 and 5 in chapter VI); N. Kh. D'yachenko, chapters III, X, and V (Except subheading 4 in chapter V); V. M. Petrov, chapters IV and VI (Except subheading 4 in chapter VI); A. K. Kostin, chapters VIII, X, and subheading 4 in chapter VII; B. P. Pugachev, subheading 1 and 4 in chapter VII, subheading 5 in chapter VII.

UDC: 621.43.001(075.8)

18-66
AM6001048

E OF CONTENTS [abridged]:

Introduction -- 3
Basic notations -- 5
I. Working principle and working cycles of internal combustion engines -- 7
II. Ideal and theoretical cycles -- 32
III. Working cycle of the internal combustion engine -- 79
IV. Process of intake, exhausting, and scavenging in two-cycle engines -- 134
Carburetion process -- 191
damentals of the combustion process theory in engines -- 250
supercharging -- 279
sfer in engines, and the combustion intensity of the working
e and characteristics -- 358

(A) L 27318-66 EWT(d)/EWT(m)/EWP(f)/T-2

ACC NR: AM6001048 Monograph UR/

D'yachenko, N. Kh.; Kostin, A. K.; Mel'nikov, G. V.; Petrov, V. M.; Kharitonov, B. A.

Theory of internal combustion engines (Teoriya dvigateley vnutrennogo sgoraniya) 58
Moscow, Izd-vo "Mashinostroyeniye," 1965. 459 p. illus., biblio. Textbook for students specializing in internal combustion engines at institutions of higher learning. Errata slip inserted. 16,000 copies printed. BH

TOPIC TAGS: internal combustion engine, carburization, engine combustion system, engine performance characteristic, engine exhaust system

PURPOSE AND COVERAGE: This book is published as a textbook for students in higher technical educational institutions and can also be used as a handbook for engine-design engineers and their technical staffs. It gives an analysis of the internal combustion engine and its applications, from agricultural equipment (stationary and mobile) through automotive and marine uses. A thorough description of turbo-superchargers and engine power rating is included. Fuel and cooling systems and their characteristics are also discussed. This book was prepared by the internal-combustion-engines faculty of the Leningrad Politechnical Institute im, M. I. Kalinin. The authors appear in the following order: B. A. Kharintovich, chapters I and IX; G. V. Mel'nikov, chapters II and VII (Except subheading 4 and 5 in chapter VII); N. Kh. D'yachenko, chapters III and VI (Except subheading 4 in chapter VI); V. M. Petrov, chapters IV and V (Except subheading 1 and 4 in chapter V); A. K. Kostin, chapters VIII, X, and subheading 4 in chapter VII; B. P. Pugachev, subheading 1 and 4 in chapter VI; Yu. N. Isakov, subheading 5 in chapter VII.

Card 1/3 UDC: 621.43.001(075.8)

L 27318-66
ACC NR: AM6001048

TABLE OF CONTENTS [abridged]:

Introduction — 3

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I. Working principle and working cycles of internal combustion engines -- 7

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IV. Process of intake, exhausting, and scavenging in two-cycle engines-- 134

V. Carburetion process -- 191

VI. Fundamentals of the combustion process theory in engines — 250

VII. Engine supercharging — 279

VIII. Heat transfer in engines, and the combustion intensity of the working cylinder -- 321

IX. Engine performance and characteristics -- 358

Card 2/3

L 27318-66
ACC NR: AM6001048

X. Automatic control of internal combustion engines -- 406

Appendix -- 455

References -- 456

SUB CODE: 21/ SUBM DATE: 16Jul65/ ORIG REF: 026/

Card 3/3

MELNIKOV, G.V.

COUNTRY : [illegible]

CATEGORY : [illegible] Insect [illegible]

: [illegible] 8, [illegible]

AUTHOR : [illegible]

INST. : [illegible]

TITLE : The Potato [illegible]

[illegible]

: [illegible] of the moth and [illegible] the moth [illegible] the tobacco harvest, [illegible] potato family. [illegible] the moth will enter the USSR, [illegible] garia, Yugoslavia, France, Italy and Spain. -- [illegible]

CARD: [illegible]

MEL'NIKOV, G.V., mladshiy nauchnyy sotrudnik

Introduction of plant diseases and pests into Japan by occupation forces. Zashch. rast. ot vred. i bol. 3 no.1:51 Ja-F '58. (MIRA 11:3)

1. VNIITI.

(Japan--Plant diseases) (Japan--Agricultural pests)

AUTHOR: Mel'nikov, G.V. SOV-26-58-8-25/51

TITLE: Nearly Extinct and Rare Animals in Japan (Vymirayushchiye i redkiye zhivotnyye Yaponii)

PERIODICAL: Priroda, 1958, Nr 8, pp 100-103 (USSR)

ABSTRACT: A special variant of the wolf, Canis lupus hattai, was exterminated by the end of the last century to protect domestic animals. A premium was granted for every wolf hide. The woodpecker Dryocopus richardsi which formerly inhabited the forests of Korea and the Island of Tsushima, was protected by law, in 1923, but now is on the point of extinction. The white crane Grus leucogeranus and the white ibis Threskiornis melanocephala have disappeared. The spotted Japanese deer (Cervus nippon jesoensis), in former times very numerous, has become quite rare. The serao (Copricornis crispus) is a hoofed animal which was protected in 1925 and the hunting of which was completely forbidden in 1953. The hunting of the sable (Martes zibellina) is forbidden since 1920. The hunting of the Manchurian crane (Grus japonensis) was forbidden at the end of the last century. In 1956, 77 of these birds could be counted. The Chinese white stork (Ciconia ciconia boyciana) was taken under special protection in 1952.

Card 1/2

Nearly Extinct and Rare Animals in Japan

SOV-26-58-8-25/51

The red-legged ibis (Nipponia nippon) living in Southern Hokaido is threatened with extinction. The albatros Diomedea albatrus has been rediscovered. In 1955 the hunting of the Central Asian ringed turtle Steptopelia decaocta stoliczkae was prohibited. Since 1923 long-tailed hens, which were raised 150 - 160 years ago, have been protected. Under protection are the wintering places of the cranes and swans as well as the nesting places of the herons.
There are 5 photos and 3 Japanese references.

ASSOCIATION: Vsesoyuznyy institut nauchno-tekhnicheskoy informatsii (All-Union Institute of Scientific Technical Information), Moscow

1. Animals--Preservation 2. Animals--Japan

Card 2/2

MEL'NIKOV, G.V.

Effect of hormones on the sex ratio in the progeny of hens.
Ptitsevodstvo 8 no. 7:40-41 Jl '58. (MIRA 11:8)
(Sex(Biology))
(Poultry breeding)
(Hormones)

MEL'NIKOV, G.V.

Statistical data on poultry raising in Japan. Ptitsevodstvo 8 no.11:40-41 N '58. (MIRA 11:11)
(Japan--Poultry)

MEL'NIKOV, G.V.

Rare animals and animals which are becoming extinct in Japan.
Priroda 47 no.8:100-103 Ag '58. (MIRA 11:9)

1.Vsesoyuznyy institut nauchno-tekhnicheskoy informatsii, Moskva.
(Japan--Zoology)

SOV/26-59-2-23/53

30(1)
AUTHOR: Mel'nikov, G.V. (Moscow)

TITLE: The Utilization of Polyvinyl Chloride and Polyethylene Pellicles in Japan's Agriculture (Primeneniye polikhlorvinilovykh i polietilenovykh plenok v sel'skom khozyaystve Yaponii)

PERIODICAL: Priroda, 1959, Nr 2, pp 95-96 (USSR)

ABSTRACT: The utilization of polyvinyl chloride and polyethylene pellicles instead of glass in hot houses in Japan is described in this article. There is 1 table.

Card 1/1

MEL'NIKOV, G.V., mladshiy nauchnyy sotrudnik; NEMAL'TSEVA, T.M., mladshiy nauchnyy sotrudnik

Controlling rice diseases and pests in Japan. Zashch. rast. ot vred. i bol. 4 no.2:48-49 Mr-Ap '59. (MIRA 16:5)

1. Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii Gosudarstvennogo komiteta Soveta Ministrov SSSR po koordinatsii nauchno-issledovatel'skikh rabot i AN SSSR.
(Japan--Rice--Diseases and pests)

MEL'NIKOV, G.V.

Growing rice in Japan. Zemledelie 7 no.10:91-92 O '59.
(MIRA 13:1)

(Japan--Rice)

MATSUDA, Khadzima [Matsuda, Hajime]; KHAYASI, Kasiva [Hayashi, Kashiwa]; MEL'NIKOV, G.V. [translator]; ATLIVANNIKOV, Yu.L. [translator]; LOBACHEV, L.A. [translator]; NEPODAYEV, Yu.A., red.; REZOUKHOVA, A.G., tekhn.red.

[Nuclear weapons and man] Iadernoe oruzhie i chelovek. Moskva, Izd-vo inostr.lit-ry, 1959. 307 p. [Translated from the Japanese] (MIRA 12:9)
(ATOMIC WEAPONS--PHYSIOLOGICAL EFFECT)

KOSTIN, A.K., kand. tekhn. nauk, dotsent; LIVENTSEV, F.L., kand. tekhn. nauk, dotsent; MEL'NIKOV, G.V., kand. tekhn. nauk, dotsent

Heat stress of the 10GK-1 gas motor compressor with evaporation cooling. Energomashinostroenie 11 no.6:20-22 Je '65. (MIRA 18:7)

L 21388-66 EGC/T/EWP(n)/EWA(h) IJP(c)
ACC NR: AP5017724 SOURCE CODE: CH/0026/65/021/004/0748/0764

AUTHOR: Chang, Nai-sen (4545/1698/2773); Hsu, Yung-ch'ang (1776/3057/2490); Ho, Yuan-fu (0149/6678/1982); Mel'nikov, G. V.; Vovenko, A. S.

ORG: none

TITLE: A multicounter system with a large scintillation tracking device

SOURCE: Wu li hsueh pao (Acta physica sinica), v. 21, no. 4, 1965, 748-764

TOPIC TAGS: physics, particle counter, proton interaction, meson interaction, scintillation detector

ABSTRACT: The authors designed and built a multicounter system using a large scintillation tracking device in order to study the elastic and nonelastic interactions between K^+ and π^+ mesons and protons at 2.5 to 5 Bev/c. K^+ and π^+ mesons were selected by a meson counter telescope consisting of 2 scintillation counters, a Cerenkov counter, and 2 gas Cerenkov speed selectors. K^+ and π^+ mesons interacted with protons in liquid hydrogen to produce secondary radiation. Phosphors used for scintillation in the counters were produced by the Soviet Joint nuclear research institute. The tracking device is capable of determining the coordinates $(\theta \pm \Delta\theta, \phi \pm \Delta\phi)$ of a particle in various positions. Pulses separated from the counters in the tracking device were analyzed by an

Card 1/3

L 21388-66

ACC NR: AP5017724

electronic system having a 20-channel analyzer. The authors introduced an amplitude limiter made with sharp cut-off pentodes (6Zh1P, 6V1P, and 6Zh9P) to the 20-channel analyzer to improve the coincidence circuit selectivity. The authors also designed a dual slow coincidence circuit for the multicounter system. The optimum discriminating time of the dual slow coincidence circuit reached 25 ~ 30 m μsec and the recording efficiency reached ≥ 98% after adjustment. Amplification coefficients of the amplifiers in the circuits were found to be at least above 20. Dead time for the 20-channel analyzer circuits were found to be above 10 μsec. The multicounter system was adjusted and inspected on a phase-stable synchrotron by the end of 1961 before it was used for measuring interactions between π^+ mesons and protons. The system can also be used for determining the cross section of π^0 mesons in the interactions. The system was employed for measuring differential cross sections of elastic scattering of π^+ mesons and protons at 3.2 Bev/c later in 1962. The following improvements were made on the system after 1962: 1) concentration of light at the counters was accomplished by total reflection instead of diffuse reflection; the distance between the system and the accelerator was adjusted to 4 meters; 2) two Moody discriminators were used in parallel instead of one for a higher recording efficiency (100%) of the 20-channel dual coincidence circuit; and 3) an inspecting system consisting of a discharge-type pulse light source was introduced to the system. The authors extend their thanks to the Russian members A. P.

Card 2/3

L 21388-66
ACC NR: AP5017724

9

Lubimov, V. S. Stavinskii, M. F. Likhachev; engineers A. S. Gavrilov, B. A. Zelenov, A. B. Komonenko; and E. N. Matveev, D. V. Uraluskii, and I. N. Kakurin of the Soviet joint nuclear research institute for their assistance. Thanks are also extended by the authors to the Phase-stable synchrotron working team of the Institute and to all the Chinese working at the High energy laboratory of the Institute for their efforts and participation in the experiments. "The experiments were completed in 1960-1961 at the Soviet joint nuclear research institute. This article was read at the 1963 physics symposium." Orig. art. has: 18 figures.

SUB CODE: 20/ SUBM DATE: 03Jan64/ ORIG REF: 005/ OTH REF: 003

18/

Card 3/3

MEL'NIKOV, G.Ye.

Work for well organized service to the public. Vest. sviazi 23 no.3: 25-26 Mr '63. (MIRA 16:3)

1. Nachal'nik Minskogo pochtamta.
(Minsk--Postal service)

MEL'NIKOV, I ., shturman dal'nego plavaniya (Vladivostok)

How to locate an object in the sea. Mor.flot 16 no.4:25-26 Ap '56.
(MLRA 9:8)

(Radar)

GUSEV, P.; MEL'NIKOV, I.

Extend the scope of socialist competition. Muk.-elev. prom. 30 no.3:3-5 Mr '64. (MIRA 17:4)

1. Zamestitel' nachal'nika Vserossiyskogo ob"yedineniya khleboproduktov (for Gusev). 2. Sekretar' TSentral'nogo komiteta professional'nogo soyuza rabochikh i sluzhashchikh sel'skogo khozyaystva i zagotovok (for Mel'nikov).

ABDULIN, A.; ALEKSEYEV, I.; BANTLE, O.; BOBROV, L.; BOZHANOV, B.; BOYKO, V.; BONDAREV, K.; BORZOV, V.; VERKHOVSKIY, N.; GUBAREV, V.; GUSHCHEV, S.; DEBABOV, V.; DIKS, R.; DMITRIYEV, A.; ZHIGAREV, A.; ZEL'DOVICH, Ya.; ZUBKOV, B.; IRININ, A.; IORDANSKIY, A.; KITAYGORODSKIY, P.; KLYUYEV, Ye.; KLYACHKO, V.; KOVALEVSKIY, V.; KNORRE, Ye.; KONSTANTINOVSKIY, M.; LADIN, V.; LITVIN-SEDOY, M.; MALEVANCHIK, B.; MANICHEV, G.; MEDVEDEV, Yu.; MEL'NIKOV, I.; MUSLIN, Ye.; NATARIUS Ya.; NEYFAKH, A.; NIKOLAYEV, G.; NOVOMEYSKIY, A.; OL'SHANSKIY, N.; OS'MIN, S.; PODOL'NYY, R.; RAKHMANOV, N.; REPIN. L.; RESHETOV, Yu.; RYBCHINSKIY, Yu.; SVOREN', R.; SIFOROV, V.; SOKOL'SKIY, A.; SPITSYN, V.; TEREKHOV, V.; TEPLOV, L.; KHAR'KOVSKIY, A.; CHERNYAYEV, I.; SHAROL', L.; SHIBANOV, A.; SHIBNEV, V.; SHUYKIN, N.; SHCHUKIN, O.; EL'SHANSKIY, I.; YUR'YEV, A.; IVANOV, N.; LIVANOV, A.; FEDCHENKO, V.; DANIN, D., red.

[Eureka] Evrika. Moskva, Molodaia gvardiia, 1964. 278 p. (MIRA 18:3)

ROZANOV, M.N.; MEL'NIKOV, L.A., prof., red.

[Problems in calculating the reliability of electric power supply in the design of electric power systems; a textbook] Voprosy ucheta nadezhnosti elektrosnabzheniia pri proektirovanii energeticheskikh sistem; uchebnoe posobie. Moskva, Vses. zaochnyi energ. in-t, 1964. 82 p. (MIRA 18:3)

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A004/A001

21.5300

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 7, pp. 169 - 170, # 25646

AUTHORS: Andreyeshchev, Ye.A., Isayev, B.M., Mel'nikov, I.F.

TITLE: Spark Counter for the Checking of Alpha-Active Contaminated Surfaces

PERIODICAL: V sb.: Issled. v obl. dozimetrii ioniziruyushchikh izlucheniy. Moscow, AN SSSR, 1957, pp. 162 - 165

TEXT: The authors describe the design of a portable recorder devised for the checking of α-active contaminated surfaces. The device is a multiwire spark counter, whose cathode (in distinction from other models described previously) possesses an area of 150 cm^2. The anode, supplied with a high-voltage current of approximately 4500 v, is composed of 25 tungsten wires of 0.1 mm in diameter, which are drawn parallel to the mirror-like polished surface of the steel cathode, at a distance of 1.5 mm from the surface of the latter. The cathode stands more than 10^7 discharges. The electrodes are fastened on a plexiglass base. The fastening

Spark Counter for the Checking of Alpha-Active Contaminated Surfaces

and straining of the wires as well as the adjustment of the distance between the cathode and the wire is effected with the aid of screws. The pulses are recorded with the aid of a small neon tube or headphones. The initial operating voltage amounts to approximately 3,800 v. It is emphasized that the efficiency of the counter does not amount to more but 0.5 - 1 %, but even this magnitude is completely sufficient for radiation monitoring. An advantage of the counter is the absence of background and the possibility of recording α-particles at any value of the β and γ-background. The device has a high stability, its weight is 4 kg. There are 5 figures and 5 references.

M.V.S.

Translator's note: This is the full translation of the original Russian abstract.

MEL'NIKOV, I.F.

Drug store of the rural district center. Zdrav. Belor. 6 no.6:68-71 Je '60. (MIRA 13:8)

(PRUZHANY DISTRICT—DRUGSTORES)

MEL'NIKOV, I. G.
CA

19

Effect of small quantities of foreign oxides on the electrical conductivity of glass. I. G. Mel'nikov, A. Ya. Kuznetsov, and V. A. Briuberg (State Optical Inst., Leningrad). *Zhur. Fiz. Khim.* 24, 1294–8(1950).—The cond. of two different glasses (I and II) has been measured at various temps. The compn. of I is $Na_2O.2SiO_2$ plus 2 to 9 mol. % of B_2O_3, CaO, or TiO_2. The cond. of I between 20 and 300° is multiplied by a factor of 2 to 3 when any of the three foreign oxides is added in quantities varying between 3 and 7% depending on the nature of the oxide and the temp. For larger quantities of admixt. the cond. drops. The compn. of II is PbO 40, and SiO_2 60 (mol. %) and a similar trend of the cond. is observed when 3 to 12% of BaO, Al_2O_3, or TiO_2 is added to the fusion mixt. The cond. passes through a max. at about 3% of the foreign oxides between 70 and 220°. In all cases, the law log cond. $= a - (b/T)$ is obeyed. The data show that the structure and the bonds of a glass are somewhat loosened by small concns. of foreign cations. The cond. is thus enhanced independently of the nature of the glass and of the added oxide. The nature of the added oxide exerts its influence at large concns. for which the cond. drops sharply. Michel Boudart

1951

MEL'NIKOV, Ivan Gerasimovich

[New procurement system for agricultural produce] Novaia sistema zagotovok sel'skokhoziaistvennykh produktov. Moskva, Gos.izd-vo sel'skokhoz.lit-ry, 1958. 101 p. (MIRA 12:10)
(Farm produce)

MEL'NIKOV, Ivan Gerasimovich; FREYDMAN, S.M., red.; SOKOLOVA, N.N., tekhn. red.

[Possibilities for improving the quality of agricultural production] Rezervy povysheniia kachestva sel'skokhoziaistvennoi produktsii. Moskva, Izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1961. 166 p. (MIRA 14:11)

(Farm produce)

MEL'NIKOV, I.G. (Leningrad)

On I.IA. Depman's book "Stories on mathematical topics" Reviewed by I.G.Mel'nikov. Mat. v shkole no.5:84-85 S-O'55. (MLRA 8:11)
(Mathematics--History) (Depman, I.IA)

SUBJECT USSR/MATHEMATICS/Algebra CARD 1/2 PG - 315
AUTHOR MEL'NIKOV I.G.
TITLE On the irreducubility of the Legendre polynomials.
PERIODICAL Ukrain. mat. Zurn. 8, 26-33 (1956)
reviewed 10/1956

The investigations on the irreducibility of the Legendre polynomials $\widetilde{P}_{2n} = P_{2n}(x)$ and $\widetilde{P}_{2n+1} = \frac{1}{x} P_{2n+1}(x)$ have been begun by Holt (Proc. London Math. Soc. 11, 351-356; ibid. 12, 126-132 and XXXI-XXXII (1913)). He has shown that all $\widetilde{P}_l$ where $l = 2^k$, 2^k+1, p, $p \pm \alpha$, $2p \pm \alpha$ are irreducible for every odd prime number p and certain positive integers α; therewith all cases of index $l > 200$ with the exception of $\widetilde{P}_{122}$, $\widetilde{P}_{185}$, $\widetilde{P}_{186}$ are solved. Further cases have been considered in the thesis of H.Ille (Berlin 1923) and in the paper due to Wahab (Duke Math. Journal 19, 165-176 (1952)). In the present paper new elementary proofs are given for the cases proved by Ille and Wahab, and for some new cases, namely $l = (p+1)p^k$, $(p+1)p^k+1$. The proofs base on the following generalization

MEL'NIKOV, I.G. (Leningrad).

Leonhard Euler and elementary mathematics; on the occasion of the 250th anniversary of his birth. Mat. v shkole no.4:1-15 S-O '57. (Euler, Leonhard, 1707-1783) (MLRA 10:8)

MEL'NIKOV, I.G.

Euler and his works in arithmetic. Ist.-mat. issl. no.10:211-228 '57.
(Euler, Leonhard, 1707-1783) (MIRA 11:1)
(Arithmetic--Before 1846)

MEL'NIKOV, I.G.; KISELEV, A.A.

Proof of the existence theorem of a primitive root by Euler. Ist.-mat. issl. no.10:229-256 '57. (MIRA 11:1)
(Euler, Leonhard, 1707-1783)
(Numbers, Theory of)

MEL'NIKOV, I.G.

V.IA. Buniakovskii's work on the number theory. Trudy Inst. ist.est.i tekh. 17:270-286 '57. (MIRA 10:7)
(Numbers, Theory of) (Buniakovskiy, V.Ya.)

MEL'NIKOV, I.G.

Problem of the division of a lemniscate. [illegible]. Uch. zap. Ped inst
Gorts. 19[illegible]:20-[illegible] '58. (MIRA 16:9)
(Lissajous' curves)

M e L ' n i K o v, I. G.

16(1) PHASE I BOOK EXPLOITATION SOV/2508

Matematicheskoye prosveshcheniye; matematika, yeye prepodavaniye, prilozheniya i istoriya, vyp. 4 (Mathematical Education; Mathematics, Its Teaching, Application and History, No. 4) Moscow, Gostekhizdat, 1959. 15,000 copies printed.

Ed.: I.M. Bronshteyn; Editorial Board of Series: I.M. Bronshteyn, A.I. Markushevich, I.M. Yaglom; Tech. Ed.: S.N. Mikheyev.

PURPOSE: This book is intended for persons without an extensive mathematical education who are interested in trends in contemporary mathematics. The book may be useful to high school mathematics teachers.

COVERAGE: The book consists of articles, reviews, and scientific and methodological reports, some of which are translations from other languages. The state of modern mathematics is covered, including applications, history, teaching of mathematics in schools, and mathematical developments in the USSR and abroad. One section deals with scientific and pedagogical life in the USSR and another contains reviews of certain mathematical publications. Some mathematical background is necessary to understand the book; certain articles require a knowledge of higher mathematics.

Mathematical Education; (Cont.) SOV/2508

2. On the Role of Mathematics in Secondary Education (Izgagnov, A.A.) 152

II. SCIENTIFIC REPORTS

Kogan, Kh.M. On the Evaluation of the Remainders of a Series With Recurrent Coefficients 155

Kotly, O.A. Generalization of the Isptomic and Isogonal Correspondences 161

Kopp, V.G. On One Type of Circular Nomogram 171

Brief Reports:
1. Zharov, V.A. One One Characteristic Property of an Isosceles Triangle 175
2. Malinkov, I.G. One One Generalization of Eisenstein's Criterion 177

Card 4/8

[redacted], I. [redacted] (London)

[redacted] Eisenstein criterion. Mat.sbor. [redacted] :
[redacted].

(Polynomials)

MEL'NIKOV, I.G.; SLAVUTSKIY, I.Sh.

Two forgotten proofs of the quadratic law of reciprocity.
Trudy Inst.ist.est.i tekh. 28:201-218 '59.
(MIRA 13:5)

(Numbers, Theory of)

MEL'NIKOV, I.G.

Euler's discovery of "convenient" numbers. Ist.-mat. issl. no.13:187-216 '60. (MIRA 14:8)
(Euler's numbers)

MEL'NIKOV, I.G.

Review of the book "Studies in the history of mathematics," no.11.
Usp.mat.nauk 15 no.5:239-243 S-O '60. (MIRA 13:10)
(Mathematics)

MEL'NIKOV, I.G.

Problem of the lemniscate equation. Part 3. Uch.zap.Ped.inst. Gerts. 218:171-177 '61. (MIRA 14:10)
(Numbers, Theory of) (Functional equations)

SIERPINSKI, Waclaw; MEL'NIKOV, I.G. [translator]

[What we know and do not know about the prime numbers. Translated from the Polish] Chto my znaem i chego ne znaem o prostykh chislakh. Leningrad, Gos.izd-vo fiziko-matem. lit-ry, 1963. 90 p. (MIRA 18:3)

L 13696-66 EPA/EWT(l)/EWP(f)/T-2 WW

ACC NR: AP6002538 SOURCE CODE: UR/0286/65/000/023/0039/0040

INVENTOR: Moskalev, Yu. V.; Dubrovskiy, D. M.; Pyatilyshnev, V. S.; Yefremov, N. D. Mel'nikov, I. G.

ORG: none

TITLE: Method of manufacturing mixed-flow compressor rotors. Class 27, No. 176657

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 39-40

TOPIC TAGS: compressor rotor, compressor blade, gas turbine

ABSTRACT: An Author Certificate has been issued for a method of making compressor rotors for low-power gas turbine units by casting. In this process the metal is poured into a special mold with pre-positioned press-forged blades. The mold is a metal shell with openings for fitting the blades and it becomes a part of the rotor. To improve the aerodynamic characteristics of the blade passages, the blade roots are

Card 1/2 UDC: 621.515-226.2.002.2

L 13696-66

ACC NR: AP6002538

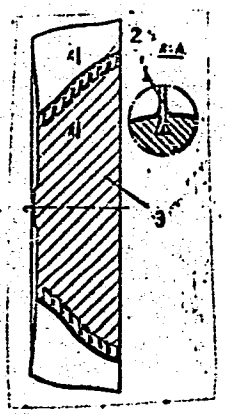


Fig. 1. Compressor rotor

1 - Blade; 2 - mold; 3 - rotor.

split and bent outward (see Fig.), and the corners between the blade and the mold shell are rounded off by welding. Orig. art. has: 1 figure. [TN]

SUB CODE: 21/ SUBM DATE: 11Sep63/ ATD PRESS: 4185

Card 2/2

MEL'NIKOV, I. I.

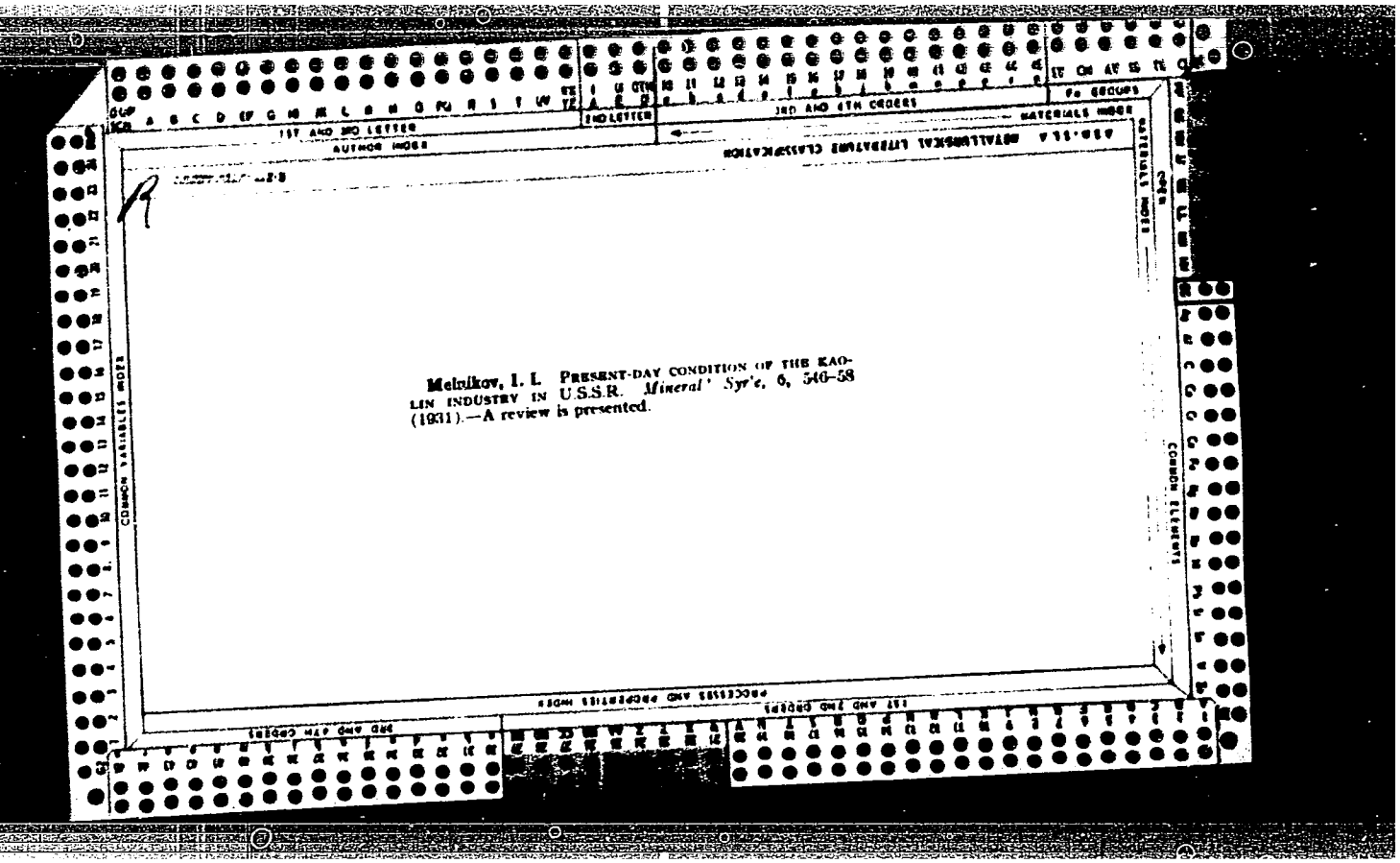
"A Study o the Fattening Quality of Hybrid Swine Obtained by Crossing Large White Breed Sows with Mirgordskiy Hogs, the Berkshire Breed, nd the Urzhumskiy Breed Groups on the State Farms of Moskovskaya Oblast." Cand Agr Sci, Moscow Order of Lenin Agricultural Acad imeni K. A. Timiryazev, Moscow, 1954. (KL, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13)
SO: Sum, No. 598, 29 Jul 55

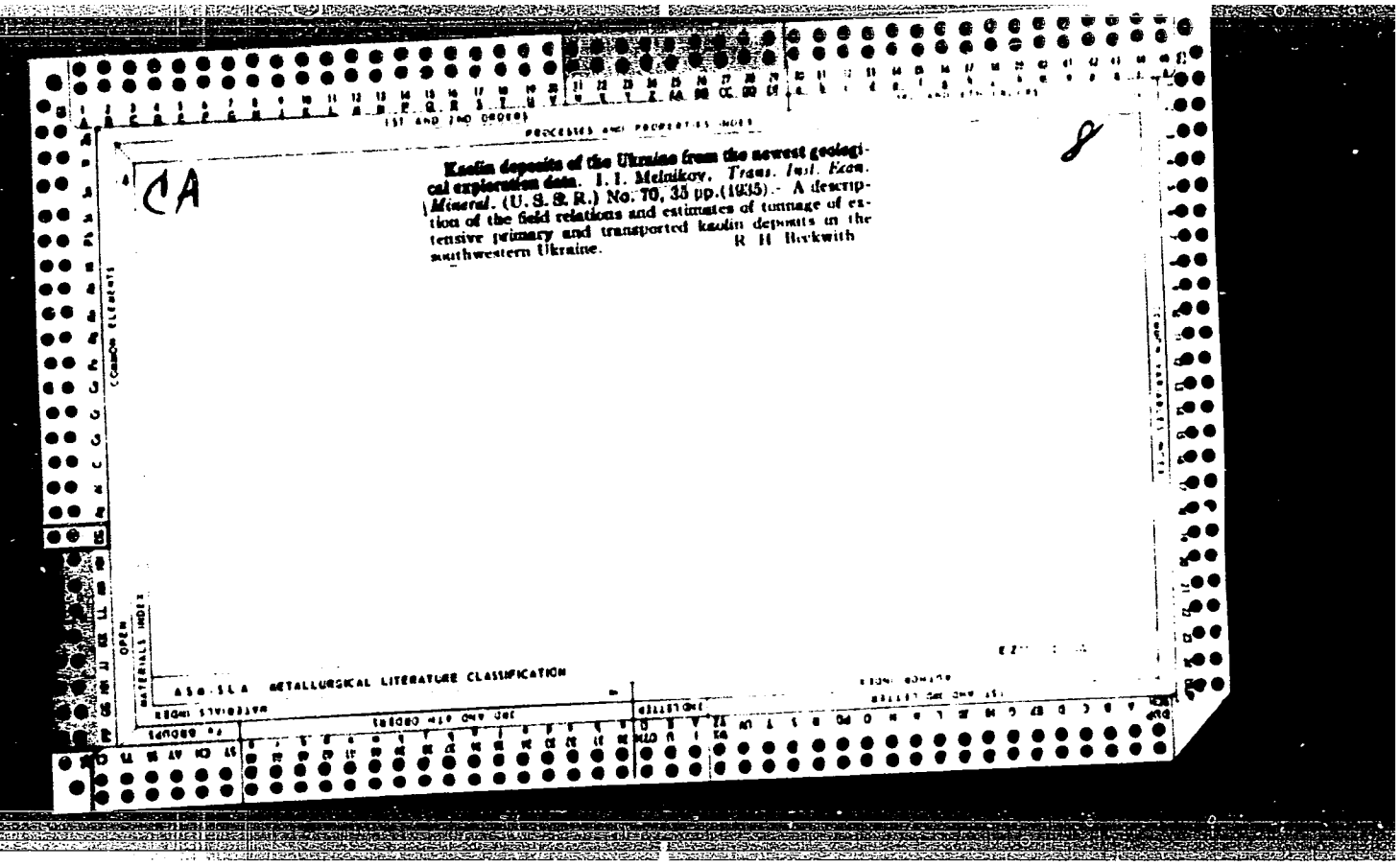
MARKOV, D.A.; MEL'NIKOV, I.I.

Work fo the White Russian Society of Physiotherapeutists and Health Resort Specialists in 1955. Vop.kur.fizioter. i lech.fiz.kul't. 21 no.2:91-92 Ap-Je '56. (MLRA 9:9)

(WHITE RUSSIA--THERAPEUTICS, PHYSIOLOGICAL)



Melnikov, I. I. PRESENT-DAY CONDITION OF THE KAOLIN INDUSTRY IN U.S.S.R. *Mineral' Syr'e*, 6, 546–58 (1931).—A review is presented.



CA

Kaolin deposits of the Ukraine from the newest geological exploration data. I. I. Melnikov. *Trans. Inst. Econ. Mineral.* (U. S. S. R.) No. 70, 33 pp.(1935).- A description of the field relations and estimates of tonnage of extensive primary and transported kaolin deposits in the southwestern Ukraine. R H Berkwith

8

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MEL'NIKOV, I. I.

Geography & Geology

Requirements of industry as to the quality of mineral raw materials. Handbook for geologists-- Komiteta po delam geologii pri SNK SSSR, No. 13, Kaolin, 1946.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

MEL'NIKOV, I.I.

Mel'nikov, I.I. "New prospective regions for organization of mining kaolin and developments of the ceramic industry," in symposium: Syr'yevyye resursy tonkokeram prom-sti SSSR i puti ikh ispol'zpvaniya, Moscow-Leningrad, 1948 p. 171-76

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

MEL'NIKOV, I. I.

Mel'nikov, I. I. Kaolin; priručnik za geologe. (Preveo s ruskog: Slobodan Jankovic) Beograd, Izdavacko-stamparsko preduzece Saveta za energetiku i ekstraktivnu industriju, 1951. 56 p. (Kaolin; a manual for geologists. Tr. from the Russian. Bibl.)

SO: Monthly List of East European Accessions, LC, Vol. 3, No. 1, Jan. 1954, Uncl.

MEL'NIKOV, I.I.

Perforator bullets producing no projecting edges in the drive pipe. Razved. i prom. geofiz. no.27:71-74 '59. (MIRA 12:7)
(Petroleum engineering)

MEL'NIKOV, I.I.

Increasing the effectiveness of perforator action by centering it in the well. Razved. i prom. geofiz. no.30:95-102 '59.
(MIRA 12:12)

(Prospecting--Equipment and supplies)

MEL'NIKOV, I.I.

New design for the facing of the cumulative cavity of blasting charges in cumulative perforators. Razved. i prom. geofiz. no.36: 70-71 '60. (MIRA 13:12)

(Oil well shooting)

MEL'NIKOV, I.I.

New cumulative charges for perforator guns. Razvd. i prom. geofiz. no.37:91-95 '60. (MIRA 14:3)
(Oil well shooting)

CHERNOSVITOV, Yu.L.; MEL'NIKOV, I.I., nauchnyy red.; KROTOVA, I.Ye., red.izd-va; BYKOVA, V.V., tekhn. red.

[Industry's requirement as to the quality of mineral raw materials] Trebovaniia promyshlennosti k kachestvu mineral'nogo syr'ia; spravochnik dlia geologov. Izd.2., perer. Moskva, Gosgeoltekhizdat. no.11 [Barite and witherite] Bari i viterit. 1963. 41 p. (MIRA 16:5)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
(Barite) (Witherite)

CHERNOSVITOV, Yu.L.; VASIL'YEV, G.A.; DZENS-LITOVSKIY, A.I.; MEL'NIKOV, I.I., nauchnyy red.

[Industry's requirements as to the quality of mineral raw materials; handbook for geologists] Trebovaniia promyshlennosti k kachestvu mineral'nogo syr'ia; spravochnik dlia geologov. Izd.2., ster. Moskva, Gosgeoltekhizdat. No.11 [Barite and witherite] Barit i Viterit. 1963. 41 p. No.70. [Bromine and iodine] Brom i iod. 1963. 47 p. (MIRA 17:3)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.

MEL'NIKOV, I.N., inzh.; SHIPERKO, A.A., inzh.

New methods of twisting threads and removing accumulated yarn on ring spinning frames used in woolen manufacture. Tekst. prom. 18 no.8:59-61 Ag '58. (MIRA 11:10)
(Spinning machinery) (Woolen and worsted manufacture)

ADAMSKIY, N.M.; KARPACHEVA, S.M.; MEL'NIKOV, I.N.; ROZEN, A.M.

Effect of temperature on the extraction of nitric acid with tributyl phosphate. Radiokhimiia 2 no.1:13-19 '60. (MIRA 14:5)
(Nitric acid) (Butyl phosphate)

ADAMSKIY, N.M.; KARPACHEVA, S.M.; MEL'NIKOV, I.N.; ROZEN, A.M.

Distribution of zirconium in the extraction with n-tributyl phosphate. Radiokhimiia 2 no.4:400-410 '60. (MIRA 13:9)
(Zirconium) (Butyl phosphate)

MEL'NIKOV, I.S.

Work in a school workshop and aesthetic training of students. (MIRA 12:7)
Politekh.obuch. no.5:7-10 My '59.
(Manual training)

MEL'NIKOV, I.S., gornyy inzh.

Self-propelled drill rig. Gor. zhur. no.9:74 S '62. (MIRA 15:9)

1. Novo-Kiyevskiy rudnik.

(Boring machinery)

MEL'NIKOV, I. S., gornyy inzh.

Plowing instead of boring and blasting. Gor. zhur. no.10:74-75 O '62. (MIRA 15:10)

1. Novo-Kiyevskiy rudnik, Orenburgskaya oblast'.

(Orenburg Province--Strip mining)

5.1600
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66969
SOV/32-25-11-43/69

AUTHOR: Mel'nikov, I. S.

TITLE: Device for Low-temperature Cooling of Samples

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 11, pp 1378-1380 (USSR)

ABSTRACT: Based on ideas published previously (Ref 1, ASTM; Engineering) a device adapted for use in the tensile-testing machine type IM-12, was designed. The device is intended for cooling samples in liquid media. Liquid nitrogen was used, but other cooling liquids can also be employed. By means of the device described, tensile strength- (smooth and notched samples), flexure-, torsional tests, simultaneous tensile strength - torsional tests, and determinations of impact resistance were carried out. The device (Fig 1) consists of a heat insulated case made of textolite, which contains the working chamber with the cooling liquid and the immersed sample held in perpendicular (tensile strength) or horizontal (torsion) position. The working chamber and the cooling liquid are cooled by liquid nitrogen (through the walls of the chamber and cooling coils) which is supplied from a container for liquid nitrogen also mounted in the case. For tests at -196°C the working chamber itself can be filled with liquid nitrogen. The two heat-insulated holders of the sample are

Card 1/2

Device for Low-temperature Cooling of Samples

attached to the IM-12 testing machine (outside the case). The temperature is measured by thermocouples and a mirror galvanometer (M25). For torsion tests, special holders are employed, but special portable chambers (Ref 2, ibid pp 1380-1381) are more suitable for this purpose, the liquid nitrogen being supplied from the present device. For cooling samples with sprayed nitrogen, an atomizer (Fig 2) is used. Temperatures of between room temperature and -120°C can be attained by means of liquid cooling media, if a patented solution (Ref 3) or light gasoline fractions are used. For temperatures varying from room temperature down to about -200°C sprayed nitrogen is applied. At temperatures of -140 to -150°C, however, the temperature distribution in the sample becomes irregular. There are 2 figures and 3 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy institut khimicheskogo mashinostroyeniya (Moscow Institute of Chemical Machine Construction)

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AUTHOR: Mel'nikov, I. S.

TITLE: Torsion Test at Low Temperatures by Means of the Device Type K-2

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 11, pp 1380-1381 (USSR)

ABSTRACT: The machine of type K-2 was redesigned with the purpose of rendering torsion tests at low temperatures possible. A special chamber was designed, adapted for cooling samples either by liquids or by sprayed nitrogen. The liquid nitrogen is conveyed into the chamber from a device described previously (Ref 1, ibid pp 1378-1380) by means of a tube. In the chamber, torsion- and tensile-strength tests are possible at temperatures varying from room temperature down to -196°C. A draft (Fig 1) of the machine type K-2 with the chamber mounted is given. The chamber is heat insulated, hermetically sealed, and fixed in a horizontal position between the holders of the machine. The test sample in the chamber is also held horizontally by these holders. A thermocouple and a thermometer are applied for temperature measurement. The torsional moment is determined with the aid of an indicator (outside the chamber, attached to a holder of the machine) accurate to about 1%. The measuring error can be reduced to 0.5% by installing a special vibrator on the pen-

Card 1/2

Torsion Test at Low Temperatures by Means of the Device Type K-2

66970
SOV/32-25-11-44/69

dulum. The maximum torsional moment is 300 kg·cm, so that samples with diameters of up to 6 mm can be tested at -196°C. There are 1 figure and 1 Soviet reference.

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Card 2/2

S/032/60/026/008/037/046/XX
B020/B052

AUTHOR: Mel'nikov, I. S.

TITLE: Device for the Machine Type ИМ-12-А (IM-12-A) for Simultaneous Elongation and Torsion Tests

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 8, pp. 1021 - 1024

TEXT: The above tensile-testing apparatus was adapted for the simultaneous measurement of elongation and torsion by a device which allows proportional and unproportional loading (in case with changed direction of the main tensions). Fig.1 shows the above machine with the device concerned. No modifications of the machine are necessary for this purpose. The above device records the angular shifts of the sample, and the shift of the screw nut. The test is occasionally interrupted for measuring the elongation of the sample. The indications of the device are recorded on a tape. The values of these indications are averaged, and the curve of the elongation during the test is plotted by using the points obtained. This method allows the measurement of elongation with

regard to the individual points, with an accuracy of up to 0.01 mm. The deformations of the testing device do not affect the elongations indicated. A deformation during the test may be concluded from the values given by the indicator. The angular shifts in the above device were determined in dependence on the pitch of the screw with an accuracy of 0.02-0.01 rad. A shortcoming of the device are the interruption of the test necessary for recording the indications, and the large number of points to be determined experimentally. These disadvantages can be eliminated by the application of a coaxial planetary reduction gear instead of the usual reducer. Simultaneous elongation and torsion tests by means of screws were carried out at increased speed of the machine. As an example, Fig.2 shows the curve of forces, moments, and angular shifts during the simultaneous elongation and torsion tests by using one screw thread. The Fig. gives the torsional moment M_{tor}, axial forces P, and the angle of rotation φ as functions of the shift of the lower handle; i.e. as functions of the sum of angular and linear shifts of the sample with regard to three tubular samples of steel Ст.3 (St.3) of

equal dimensions (outer diameter 10 mm, wall thickness 1 mm). The upper part of the diagram gives the data of the indicator, from which the approximation curves of elongation and of the angles of torsion were plotted. The maximum divergence of P_{max} is 2.2%. The dependence $M_{tor} = f(P)$ was plotted from the curves M_{tor} and P. From this dependence, the average value of the ratio between the main tensions during the test is determined. There are 2 figures and 3 references: 1 Soviet, 1 British, and 1 Swiss.

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Fig.1

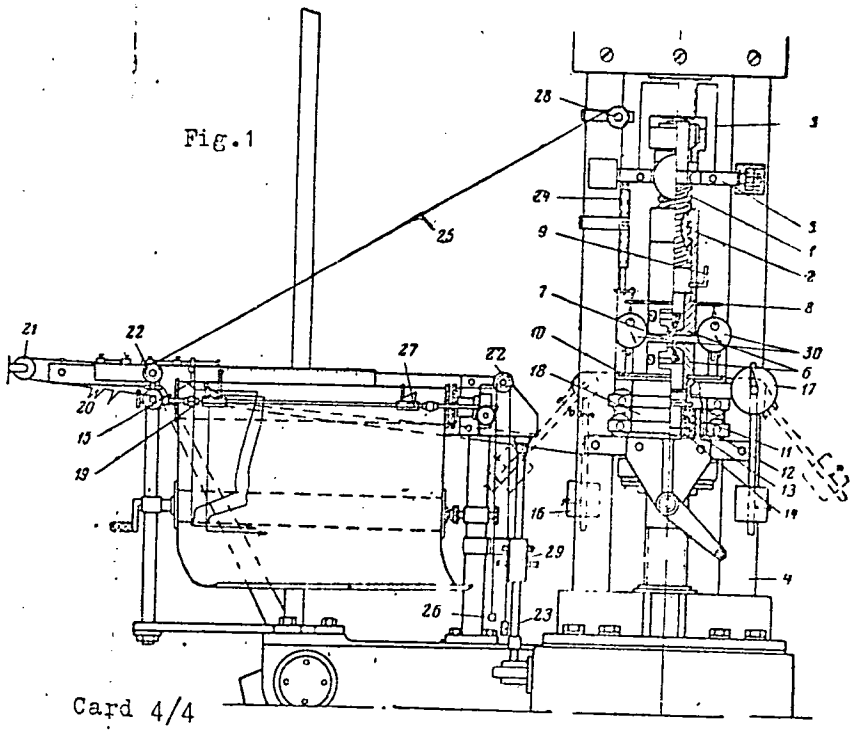

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Fig.1

Card 4/4

MEL'NIKOV, I.S., inzh.

Comparing the mechanical properties of St. 3, 15K, and M steels at low temperatures. Trudy TSNII MPS no.195:116-145 '60. (MIRA 13:9)

(Steel-Testing) (Metals at low temperatures)